NATIONAL TRANSPORT RESEARCH CENTRE

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BAHAWALPUR
TRAFFIC ACCIDENTS - CASE STUDY

NTRC-D.S - 5

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MARCH, 1984

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With continuous spate of traffic accidents causing great loss to life and property, it is imperative that causes leading to these accidents should be looked into thoroughly and scientifically so that preventive measures are correctly planned.

2. The following is the break-up of fatal and non-fatal accidents occurring in Bahawalpur district (Volume of traffic Appendix - I).

Year	Non-Fatal		Fatal		Total
1977	72	71.29 %	29	28.71 %	101
1978	107	79.25%%	28	20.75 %	135

3. While figures have been collected accurately, the biggest obstacle in the study was the fact that all F.I. Rs. recorded by the Police in cases of accidents are worded alike stating that accident was caused due to rash and negligent driving. To get to real facts, some effort was made to look into the case-diaries where the investigating officers have eleborated, to some extent, the real cause of accident.

I. FATAL AND NON-FATAL ACCIDENTS

4. The figures reveal that seventy to eighty per cent of the accidents are non-fatal. The fatality of the accidents, however, cannot only be evaluated by figures alone. The line

between the non-fatal and fatal is very thin and an important factor, under the circumstances, is the availability of medical aid. People receiving prompt and adequate attention, not readily available in accidents on far-fetched highways, have survived.

5. This aspect highlights the crying need of creating an 'Accident Service' with the hospitals where most of the ambulances are not available for the chartered duties, much less an accident. The ambulance service should be developed to save human lives in road accidents. The dispensaries in the rural areas should also be equipped to deal with such eventualities.

II. PERSONS KILLED/INJURED IN ACCIDENTS

The following figures showing the persons killed or injured in road accidents will further prove the point.

	1977		1978	
	No.	Percentage	No.	Percentage
1. Passengers (includes drivers of vehicles).	55	50.93	60	43.79 %
2. Pedestrians	27	25	31	22.62 %
3. Cyclists	12	11.11	24	17.51 %
4. Motor Cyclists	13	12.03	21	15.34 %
5. Cart Drivers	1	0.93	1	0.74 %
	108	100	137	100

6. It is important to note that more than half of those killed were pedestrians. The casuality of passengers comes second. Passengers, however, constituted half the number

of those injured in these accidents. In other words, the risk for dying as a result of accidents is the greater for a pedestrain than a passenger.

7. This aspect needs consideration. Road planners, the Police and other agencies must ensure that pedestrains are provided with safe road-crossings and halting points as quite a few die while getting into or off the bus.

III. LOCATION OF ACCIDENTS

	1977				1978			
	Fatal	N.Fatal	Total	%	Fatal	N.Fatal	Total	%
1. Accidents in city areas	9	40	49	48.51	8	57	65	48.14
2. Accidents on highways	8	16	24	23.76	14	36	50	37.04
3. Accidents on single rural roads	12	16	28	27.73	6	14	20	14.82
	29	72	101	100	28	107	135	100

8. It has been interesting to observe that half the number of accidents in both these years were caused within the city area. This warrants the attention of the Traffic Staff, Muncipal Committee and the Highways Department. Presently, most of the efforts to prevent accidents are directed towards the highways.

9. While the number of fatal accidents on the highways and the rural roads is twice, the number in city areas, in the come of non-fatal accidents, the incidence in city areas is twice that of the highways and the rural roads.

10. The figures also suggest that the high fatality on the rural roads and highways could also be due to lack of

timely medical aid which is available in the case of city accidents.

11. The following table shows the places of accidents in relation to their proximity :-

	1977		1978	
	Number	Percentage	Number	Percentage
1. Houses/shops, habitation near place of accidents	26	50 %	35	47.29 %
2. Accidents on clear road	24	46.16 %	36	48.65 %
3. Accident near bridge/ culvert	2	3.84 %	3	4.06 %
	52	100	74	100

12. The incidence of accidents on open road is almost at per with accidents taking place near populated areas. The common cause appears to be rash and negligent driving.

13. The remedy lies in providing road signs and speed-breakers in populated areas and speed checks on the open roads.

14. It is widely believed that road warning signs have a psychological effect on the drivers' mind, and as such, should be extensively used.

IV. VEHICLES INVOLVED IN ROAD ACCIDENTS.(APPENDIX - II)

15. The figures in Appendix - II indicate that motorised transport was involved in nearly 80 % of the accidents while the rest were caused by human/animal driven vehicles.

16. The following conclusions can be drawn from this study :-

(i) Buses were involved in most in these accidents with 24.28 % involvement in 1977 and 19.41 % in 1978.

(ii) Trucks were involved in 18.58 % of the accidents in 1977 and 16.50 % in 1978.

(iii) Motorcycles and scooters were involved in 14% of the accidents in both these years.

(iv) Cars/Jeeps constituted 9.28% in 1977 and 12.14% in 1978, with a similar percentage for bicycles.

V CAUSES OF ACCIDENTS

17. Appendix - III gives the break up of various causes of accident. While the first part reveals the causes as reported in the F.I.Rs. there 97/98 % of the accidents were caused due to rash and negligent driving and the rest ascribed to mechanical failure.

18. The case-diaries submitted by the investigating officers for the cases registered in 1978 have also been given in great detail in the appendix.

19. Nearly 43 % of the accidents were caused by rash and negligent driving and the next biggest cause was overtaking of vehicles which constituted almost 18 %.

20. Bad roads contributed 3.7% and mechanical failure less than 4 %.

21. These figures clearly earmark the areas requiring greater attention, both for preventive and corrective actions.

VI. DRIVING WITHOUT LICENCE

22. The investigations also reveal that of the 163 vehicles involved in road accidents, 44 were being driven without licence which constituted 27 % of the total. Of these violators, 19 were motorcyclists and 25 others.

VII. TIMING OF ACCIDENTS

23. The following data was collected for the accidents caused during the year 1978 :-

Time Range	No.of Accidents	Percentage
0000 to 0600 hours	2	1.49
0600 to 1200 hours	55	40.74
1200 to 1800 hours	55	40.74
1800 to 2400 hours	23	17.03

24. The largest number of accidents, 81.4% were caused between 6 a.m. to 6 p.m.; 17 % were caused between 6 p.m. and midnight; and, less than 2 % between midnight and 6 a.m.

25. These figures indicate the relation of accidents to the volume of vehicular traffic during twenty-four hours. As such preventive and enforcement efforts can be planned according to the incidence of accidents.

26. It has further dispelled the belief that trucks travelling during the night cause more accidents.

VIII. NATURE OF ACCIDENTS

27. The table below shows the nature of accidents caused during the years 1977 and 1978 :-

	1977		1978	
	Number	Percentage	Number	Percentage
1. Two vehicles colliding	35	34.65	68	50.37
2. Vehicles running over pedestrians	38	37.62	49	36.29
3. Vehicles striking into trea, etc.	13	12.88	11	8.15
4. Passengers dropped from the vehicles	11	10.89	3	2.23
5. Overturning of vehicles	2	1.98	2	1.98
6. Three vehicles involved	2	1.98	2	1.98
	101	100	135	100

28. Most of the accidents have been caused due to the collision of vehicles or the over-running of pedestrians.

IX. CONVICTIONS

29. The position regarding the cases tried in the courts of law is as follows :-

Sent Up	Decided	Pending	Acquitted	Convicted
87	48	39	24	24
100 %	65.2 %	44.8 %	32.6 %	32.6 %

30. The convictions awarded were as follows :-

Maximum punishment awarded - Nil

Imprisonment awarded - In one case, one month's simple imprisonment

Range of Fine imposed

Rs. 2,000/-	1
Rs. 900/-	1
Rs. 500/- to 600/-	2
Rs. 400/-	5
Rs. 200/- to 300/-	8
Rs. 100/-	5
Rs. 50/-	1

31. The main reasons for the high rate of acquittals is, firstly, compromise between the parties; and secondly, witnesses turning hostile which again results from a compromise.

X. RECOMMENDATIONS

(i) The commission system amongst the drivers creates a premium on driving fast, loading to accidents. This is proved by the fact that the largest number of accidents are caused due to rash and negligent driving (43 %) and overtaking of vehicles (18 %). This system will have to be done away with by fixing hourly wages restricting the number of working hours in a day.

(ii) The municipal bodies should arrange for proper bus stops and highway crossings providing protection to pedestrians whose casualty is the highest. Besides, traffic education must be imbibed into the system pointing out traffic hazards to the unwary public.

(iii) While compensation rules exist to provide monetary benefits to passengers killed or injured, there is no such

benefit for pedestrians. Proper law should be enacted to provide for a scale of payment relating to the nature of injuries for the benefit of pedestrians. This will also provide some determent to the rash or negligent driver.

(iv) An efficient 'Accident Serivce' should be laid out providing ambulance, first-aid, salvage facilities like the extraction of passengers from the vehicles, workshop facilities, etc.

(v) Town planners and highway engineers should cater for pedestrian crossings in urban and rural areas. With an increase in the volume of vehicular traffic, underground crossings and overhead bridges should be provided at busy crossings.

(vi) Nearly one-fourth of the total accidents involved persons who were driving without a licence. Besides strict enforcement and checking by the concerned agencies, the system of issuing driving licences should be streamlined to ensure that licences are issued after proper test promptly. While, on the one hand, people manage to get a licence without a test, on the other, a genuine driver gets frustrated with the delays and mal practices in the offices.

(vii) The present system of a yearly renewal proves a nuisance. Fresh licences should be issued for five years without renewals. This will eliminate the present involvment of thousands of Post Offices, non-availability of tickets and chactic office records.

(viii) A licence on the pattern of the Registration Card will reduce the possibility of forgery.

(ix) Due to inadequate transport, at places, there is a tendency for the passengers to get on top of the buses. This is highly dangerous. It is, therefore, suggested that the bus bodies should provide for the carrying of luggage under the seating area with no fixtures or racks on top of the buses. This system is prevalent in the western countries where buses have a smooth roof. This will also help the passengers in keeping an eye on their luggage while sitting in the bus and prevent theft and pilferage.

(x) In urban areas, double-deckers should be used to case the burden of overloading on single buses. Such arrangements are feasible in view of the limited breadth of city roads.

(xi) The penal laws should enhence the rate of fine rather than the imprisonment. The fines may then be paid as compensation to the injured persons. Imprisonment brings no benefit to the aggrived and serves as a great punishment to the innocent family of the reckless driver. Drivers are not criminals and a sentence in jail would probably make them so.

(xii) The courts should be empowered to make a settlements between the two parties after payment of reasonable damages rather than passing sentences of imprisonment.

(xiii) To reduce the work-load of the existing courts, local bodies may be given the function of deciding cases of traffic accidents and sattlement of damags

(xiv) A whole-time Police Post should be established at the Government hospitals for fulfilling the formalities of medico-legal cases. This will reduce the difficulty faced by the public in firstly reporting the accident to the Police Station, the jurisdiction and location of which is generally not known.

Acknowledgements:

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Appendix - I

AVERAGE DAILY VEHICULAR TRAFFIC PASSING THROUGH SUTLEJ BRIDGE NEAR BAHAWALPUR

March, 1979.

Buses	322.5
Trucks	557.4
Wagons/Tractors	15.7
Cars/Jeeps	106.5
Motercycles	86.1
Total: ...	1081 per day

Appendix - II.

STATEMENT SHOWING VEHICLES INVOLVED IN FATAL ACCIDENTS

		1977		1978	
		Number	Percentage	Number	Percentage
1.	Buses	15	42.85	12	35.28
2.	L.T.V.	1	2.86	4	11.44
3.	M/cycles/Scooters	6	17.14	5	14.28
4.	Tractors	4	11.42	3	8.58
5.	Cart/Tonga	1	2.86	3	8.58
6.	Truck	6	17.14	5	14.28
7.	Cycle	1	2.86	2	5.70
8.	Car/Jeep	1	2.86	1	2.86
		35	100	35	100

REPORTED CASES OF ACCIDENTS

	1977		1978	
	Case	Percentage	Case	Percentage
1. Rash/negligent driving	98	97.03	133	98.52
2. Mechanical Fault	3	2.97	2	1.48

FURTHER BREAK UP OF CAUSES OF ACCIDENTS INFERRED FROM THE CASE DIARIES OF INVESTIGATING OFFICERS-1978

	No.	Percentage
1. Sheer negligent and rash driving	58	42.96
2. Accidents while overtaking	24	17.78
3. Overloading of cycle, Motorcycle	9	6.67
4. Negligence of pedestrian	9	6.67
5. Animal going out of control	6	4.45
6. Bad road	5	3.70
7. Turning without indicators/indication	4	2.97
8. Overloading of buses/trucks	2	1.48
9. Vehicle without light	2	1.48
10. Slippery road due to rains	2	1.48
11. Dazaling lights	2	1.48
12. Mechanical Defect	2	1.48
13. Rash Turning	1	0.74
14. Side-light missing	1	0.74
15. Accident while reversing	2	1.48
16. Sudden application of brakes,without signal	1	0.74
17. Vision blocked due to dust screen	1	0.74
18. Driver talking with Conductor	1	0.74
19. Fatigue due to ever-work	1	0.74
20. Cyclist alarmed due to Pressure Horm	1	0.74
21. Accident due to onimosity	1	0.74
	135	100